Amendments to the Claims

The following listing of claims replaces all prior versions of the claims pending in this application. Claims 1, 6, and 38 are amended without any intention of disclaiming equivalents thereof, and claims 2-4 and 57-116 are canceled without prejudice to reintroducing claims directed to this subject matter in this or another patent application.

Listing of Claims:

1. (Currently Amended) A method for preparing a nerve graft, the method comprising:

   ~~culturing~~ degrading chondroitin sulfate proteoglycan of a nerve graft comprising a nerve tissue segment and having an intact basal lamina tube by *in vitro* culturing, thereby ~~*in vitro* under predegenerating conditions that remodel the nerve graft and that increase the neurite-promoting activity of the nerve graft when the~~ enhancing post-implantation axonal traversal of an interface between the nerve graft and host nerve tissue relative to an untreated nerve graft ~~is in use~~; and

   rendering the nerve graft acellular by killing cells in the nerve graft.

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Currently Amended) The method according to claim 1, wherein said culturing of the nerve graft *in vitro* is for a period of time that achieves an increase in post-implantation axon ingress and extent of growth within the nerve graft ~~when the~~ relative to the untreated nerve graft ~~is in use~~.

7. (Previously Presented) The method according to claim 1, wherein said culturing of the nerve graft *in vitro* is for a period of time within the range of about 24 hours to about 96 hours.

8. (Previously Presented) The method according to claim 1, wherein said culturing of the nerve graft *in vitro* is for a period of time within the range of about 24 hours to about 72 hours.

9. (Previously Presented) The method according to claim 1, wherein said culturing of the nerve graft *in vitro* is for a period of time of about 48 hours.

10. Previously Presented) The method according to claim 1, wherein said culturing of the nerve graft *in vitro* is conducted at a temperature within the range of about 10° C to about 37° C.

11. (Previously Presented) The method according to claim 1, wherein said culturing of the nerve graft *in vitro* is conducted at a temperature within the range of about 30° C to about 37° C.

12. (Previously Presented) The method according to claim 1, wherein said culturing of the nerve graft *in vitro* is conducted at a temperature of about 37° C.

13. (Previously Presented) The method according to claim 1, wherein the nerve graft is an explant.

14. (Previously Presented) The method according to claim 1, wherein the nerve graft is mammalian tissue.

15. (Previously Presented) The method according to claim 1, wherein the nerve graft is mammalian tissue selected from the group consisting of human tissue, non-human primate tissue, porcine tissue, rodent tissue, and bovine tissue.

16. (Previously Presented) The method according to claim 1, wherein the nerve graft is human tissue.

17. (Original) The method according to claim 1, wherein the nerve graft is an autograft.

18. (Original) The method according to claim 1, wherein the nerve graft is an allograft.

19. (Original) The method according to claim 1, wherein the nerve graft is a xenograft.

20. (Previously Presented) The method according to claim 1, wherein rendering the nerve graft acellular by killing cells in the nerve graft occurs after culturing.

21. (Previously Presented) The method according to claim 1, wherein rendering the nerve graft acellular by killing cells in the nerve graft comprises a process selected from the group consisting of freeze-killing and chemical treatment.

22. (Previously Presented) The method according to claim 1, wherein said method further comprises freezing the nerve graft for storage.

23. (Original) The method according to claim 22, wherein said freezing is carried out after said culturing *in vitro*.

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Previously Presented) The method according to claim 1, wherein the nerve graft comprises peripheral nerve tissue.

31. (Previously Presented) The method according to claim 1, wherein said culturing comprises placing the nerve graft in contact with culture medium.

32. (Original) The method according to claim 31, wherein the culture medium comprises a defined medium.

33. (Original) The method according to claim 31, wherein the culture medium comprises a defined medium supplemented with serum.

34. (Original) The method according to claim 31, wherein the culture medium comprises undefined medium.

35. (Original) The method according to claim 31, wherein the culture medium comprises dulbecco's modified eagles' medium.

36. (Previously Presented) The method according to claim 1, wherein said method further comprises isolating the nerve graft from a mammal prior to said culturing of the nerve graft *in vitro*.

37. (Previously Presented) The method according to claim 1, wherein said method further comprises applying a tissue adhesive to the nerve graft .

38. (Currently Amended) A method for enhancing the regenerative potential of a nerve graft, the method comprising:

~~culturing~~ degrading chondroitin sulfate proteoglycan of a nerve graft comprising a nerve tissue segment and having an intact basal lamina tube by *in vitro* culturing, thereby ~~*in vitro* under predegenerating conditions that increase the neurite-promoting activity of the nerve graft when the~~ enhancing post-implantation axonal traversal of an interface between the nerve graft and host nerve tissue relative to an untreated nerve graft ~~is in use~~, wherein culturing ~~the~~ conditions comprise ~~comprising~~ a temperature within the range of about 10° C to about 37° C for a period of time within the range of about 24 hours to about 96 hours; and

rendering the nerve graft acellular by killing cells in the nerve graft .

39. (Previously Presented) The method according to claim 38, wherein said culturing of the nerve graft *in vitro* is for a period of time within the range of about 24 hours to about 72 hours.

40. (Previously Presented) The method according to claim 38, wherein said culturing of the nerve graft *in vitro* is for a period of time of about 48 hours.

41. (Cancelled)

42. (Previously Presented) The method according to claim 38, wherein said culturing of the nerve graft *in vitro* is conducted at a temperature within the range of about 30° C to about 37° C.

43. (Previously Presented) The method according to claim 38, wherein said culturing of the nerve graft *in vitro* is conducted at a temperature of about 37° C.

44. (Previously Presented) The method according to claim 38, wherein said culturing comprises placing the nerve graft in contact with culture medium.

45. (Original) The method according to claim 44, wherein the culture medium comprises defined medium.

46. (Original) The method according to claim 44, wherein the culture medium comprises defined medium supplemented with serum.

47. (Original) The method according to claim 44, wherein the culture medium comprises undefined medium.

48. (Previously Presented) The method according to claim 38, wherein rendering the nerve graft acellular by killing cells in the nerve graft occurs after culturing.

49. (Previously Presented) The method according to claim 38, wherein rendering the nerve graft acellular by killing cells in the nerve graft comprises a process selected from the group consisting of freeze-killing and chemical treatment.

50. (Previously Presented) The method according to claim 38, wherein the nerve graft is mammalian tissue.

51. (Previously Presented) The method according to claim 38, wherein the nerve graft is mammalian tissue selected from the group consisting of human tissue, non-human primate tissue, porcine tissue, rodent tissue, and bovine tissue.

52. (Previously Presented) The method according to claim 38, wherein the nerve graft is human tissue.

53. (Previously Presented) The method according to claim 38, wherein the nerve graft comprises peripheral nerve tissue.

54. (Original) The method according to claim 38, wherein the nerve graft is an autograft.

55. (Original) The method according to claim 38, wherein the nerve graft is an allograft.

56. (Original) The method according to claim 38, wherein the nerve graft is a xenograft.

57.-116. (Cancelled)

117. (Previously Presented) The method according to claim 1, wherein the nerve graft comprises central nervous system tissue.

118. (Previously Presented) The method according to claim 38, wherein the nerve graft comprises central nervous system tissue.

119. (Previously Presented) The method according to claim 38, wherein the nerve graft is an explant.

120. (Previously Presented) The method according to claim 38, wherein said method further comprises freezing the nerve graft for storage.

121. (Previously Presented) The method according to claim 120, wherein said freezing is carried out after said culturing *in vitro*.

122. (Previously Presented) The method according to claim 38, wherein said method further comprises isolating the nerve graft from a mammal prior to said culturing of the nerve graft *in vitro*.

123. (Previously Presented) The method according to claim 38, wherein said method further comprises applying a tissue adhesive to the nerve graft.